Next AUG Meeting
Sunday, July 15th at 2pm
(Doors open at 1pm, meeting starts at 2pm sharp)

**AUG meetings are held at Victoria College Burwood Campus
Burwood Highway, Burwood - Melways map 61 reference B5.**

Amiga Users Group Inc, PO Box 48, Boronia 3155 Victoria, Australia

AMIGA Users Group

Who Are WE?

The Amiga Users Group is a not-for-profit association of people interested in the Amiga computer and related topics. With over 1000 members, we are the largest independent association of Amiga users in Australia.

Club Meetings

Club meetings are held at 2pm on the third Sunday of each month at Victoria College, Burwood Highway, Burwood. Details on how to get there are on the back cover of this newsletter. The dates of upcoming meetings are:

Sunday, July 15th at 2pm

Sunday, August 20th at 2pm

Sunday, September 17th at 2pm

Production Credits

This month's newsletter was edited by Con Kolivas. Equipment and software used was: Amiga 500 with SIN500-2 memory board,, Professional Page, and Apple LaserWriter Plus.

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Contributions

Articles, papers, letters, drawings, cartoons and comments are actively sought for publication in Amiga Workbench. All contributions submitted for the purpose of publication that are printed in the newsletter are rewarded on the basis of one free public domain disk copy per column or half page printed with a minimum of one free copy. Contributions may be sent in on disk, paper or uploaded to Amiga Link or Amiga Link II in the area set aside for this purpose. Please send your contributions in text-only, non-formatted if they are on file and remember to include your address for return of disks and tokens for PD disks. Absolute deadline for articles is 23 days before the meeting date. Contributions can be sent to: The Editor, AUG, PO box 48, Boronia, 3155.

Membership and Subscriptions

Membership of the Amiga Users Group is available for an annual fee of $25. To become a member of AUG, fill in the membership form in this issue (or a photocopy of it), and send it with a cheque or money order for $25 to: Amiga Users Group, PO Box 48, Boronia, 3155

Public Domain Software

Disks from our public domain library are available on quality 3.5" disks for $8 each including postage on AUG supplied disks, or $2 each on your own disks. The group currently holds over 200 volumes, mostly sourced from the USA, with more on the way each month. Details of latest releases are printed in this newsletter, and a catalog disk is also available.

Member's Discounts

The Amiga Users Group negotiates discounts for its members on hardware, software and books.

Currently, Technical Books in Swanston Street in the city offers AUG members a 10% discount on computer related books, as does McGills in Elizabeth Street. Just show your membership card. Although we have no formal arrangements with other companies yet, most seem willing to offer a discount to AUG members. It always pays to ask!

Back Issues of Workbench

All back issues of Amiga Workbench are now available, for $2 each including postage. Note that there may be delays while issues are reprinted. Back issues are also available at meetings.

Amiga Link I & II - Our Bulletin Board Systems

The Amiga Users Group operates two bulletin board systems devoted to the Amiga, using the Opus message and conferencing software. AmigaLink I and II are available 24 hours a day. AmigaLink I & II can be accessed at V21 (300bps), V22 (1200bps), V23 (1200/75bps) or V22bis (2400bps) using 8 data bits, 1 stop bit and no parity.

AmigaLink is part of a world-wide network of bulletin boards, and we participate in national and international Amiga conferences. AmigaLink has selected Public Domain software available for downloading, and encourages the uploading of useful public domain programs from its users. AmigaLink I (792-3918) is OzNet node number 8:830/324 and AmigaLink II (376-6385) is OzNet node number 1305/998

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The Amiga Users Group accepts commercial advertising in Amiga Workbench subject to the availability of space at these rates:

Quarter page $20
Half page $40
Full page $70
Double page spread: $120

These rates are for full-size camera-ready copy or Professional Page format only. We have no photographic or typesetting facilities. Absolute deadline for copy is 23 days before the meeting date. Send the copy and your cheque to: The Editor, AUG, PO Box 48, Boronia, 3155, Victoria.

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Elephant SCRAMBLES
or
How to remember another 2 Megabytes!
by Con Kolivas

Well, you've probably already noticed that this month's newsletter is markedly different from any of the other ones I have edited. There is a good reason for this, as I will explain. This month's newsletter was finally produced entirely using Professional Page which, by now most of you will be aware, was given to the club as an offering from Commdore in Sydney (thanks to Mike Clark once again.) However, I found I could not use the program to it's fullest (in fact far from it's fullest) with only one Megabyte of memory on my poor A500 (only one Meg? since when has one Meg become only?). The club, since then has been looking into, at my request, purchasing memory for the purpose of creating the newsletter in a more compact, yet actually more readable form - one in ten point Times Roman font, which is unavailable to my Word Processor, Excellence! Given extra memory, I could produce the newsletter using Professional Page (which is more an editor's tool than is Excellence!) and get a smaller newsletter (reducing funds devoted to the newsletter without the problem of losing the amount of useful information in the print.

In steps Power Peripherals (ad in here elsewhere and in last month's newsletter). This company recently formed and based in Melbourne, are the sole Australian importers of Spirit Technology and sell direct to the public (thereby eliminating any extra dealer profit). We approached them and asked if they would allow us to evaluate one of their memory boards, the SIN-500-2 in particular. They generously offered to loan us a board. Now for the important part; the review...

So what happened? Well after returning home and looking carefully through the instructions (it's amazing how easy things are when you have read the instructions), I started pulling apart my A500 - note you do not have to install it yourself. This was not new to me so was no great hassle. Then I pulled out my 68000 and placed it on the board (the board was already populated with 2 Megs when we received it.) and placed it in the processor slot. Things didn't look too good when it didn't sit too flush on the board as the spacers were still sitting in the air, not resting as they should have been. After running the test procedure (turning it on) I found nothing worked. So I carefully went through all the instructions and even pulled it apart and put it back together again to make sure it wasn't my 68000. Nothing, so I called up the company and told them of my problem. They said they would send someone over to have a look at it. But I couldn't wait, so I began fiddling. It turned out my processor slot was actually too tight (a rarity I believe) and so I held the board down firmly for about ten minutes and turned it on - hey presto, it worked! Then I ran the test disk and all checked out fine. So when they called again I told them I no longer needed someone ot look at it. Anyhow, since then I have only had one hiccup and that was just my 68000 not sitting properly on the board - so I applied firm even pressure and all was well.

So, enough said about installation, what about the board itself? Well, you can simply look at this newsletter to see what difference it has made to it's real purpose, allowing me to use Professinal Page. But what about all round? Well, for the first time, I had a real chance to see how slow Professional Page was. It turned out to be very slow during deleting (backspace) but actually faster than Excellence! Boy, was I shocked. Then I ran Excellence! to see what difference the memory would have on that - well, you might have guessed, it sped up also. By running FastMemFirst, which makes sure the computer puts all "Public" data into Fast Memory (anything not accessed by all the chips such as Fat Agnus, it would speed up certain things, because it was being accessed less. Ok, enough theory, what about juicy bits. Well, I can now use Professional Page to much further than page 4 of the newsletter, I can digitise sounds for around three and a half minutes in standard 8363 sample rate, and graphics programs are beautiful, if not at times a bit odd because of their chip memory usage. How about games? well since I already had one megabyte, if there was an old game which didn't work with fastmem, I had already corrected it as best I could using special bootblocks or putting nofastmem in the startup-sequence. So most games did not change. Why most games you say, shouldn't it be no different than with one Meg now that you have three? Well, some games use extra memory, and it is actually better with 3 megs than before. OutRun for instance, will not load a stage more than once now because once it is in memory, it will stay there. I've even done naughty things, like crating Rad disks that are exactly the same size as normal disks (79 tracks) and used diskcopy to put the game onto what turns out to be faster than a hard drive. hehe. You should see Battlechess and Kings Quest etc now! Things limiting now are the decompression of the data by the program!

Well, what about the price? Well, if you look at the ad, you will see that a fully populated baord of this type (SIN500) will set you back $975. If you think that is too expenisve, then look around at other boards available. If you buy those MiniMegs which are pretty cheap, 2 Megs will cost you around $1200, and they will clutter up your BUS, not leaving any room for a standard hard-drive! Thses Spirit boards disappear in your computer, and are "Transparent" to all other operations. They include an optional power supply if you are already pushing your poor A500's transformer to it's upper limits which is around 5 amps I think. The board uses 256x4 DRAMS and is relatively low on power drainage. The memory is AutoConfig or off if you wish, you set it yourself on the board.

So, what about probelms? Um let's see... perhaps it isn't very useful if you want to keep removing your memory and putting it onto other computers? Other than that, I can't really see any problems. It has performed flawlessy ever since it was installed properly and was a dream to use. I higly recommend it, and if you want further details on the board, call Power Peripherals on 369-7020, and please read the editorial at the back of this newsletter for more information.

Game Review: Dragon's Lair

A few years ago, an ex-Disney animator by the name of Don Bluth had the brilliant idea of an interactive laserdisc cartoon, that is, one that allowed the player to affect which scenes would be displayed. This was Dragon's Lair, in which Dirk the Daring attempted to rescue the Princess Daphne from Singe the Evil Dragon, encountering all sorts of nasty things in the pro-

cess. The inevitable microcomputer versions followed.

The Amiga version comes on six disks, no less, comprising 130 megabytes of compressed graphics and sound. As the game progresses, you are asked to insert various disks (with a screen resembling the 'insert workbench disk' screen you normally see on booting - a hand holding up a 'Dragon's Lair' disk!). There is provision for installing all six disks on a hard disk, if you have a Comspec SCSI 10-megabyte partition to spare. One pleasing feature of this game is that it recognises extra drives, so if you have a DF1: and DF2:, then disk swapping is minimised (shame more programs aren't that smart!). You can also toggle the audio on and off, toggle the low pass filter (on 500's and 2000's) on and off to improve sound quality, and toggle high resolution mode on and off (turning it on reduces the display to a square about one-quarter size in the middle of the screen).

The only annoying parts about this game are the delays between loading scenes (which are to be expected, really) and the somewhat passive role the player assumes... to quote the instructions, 'You do not directly control Dirk's actions, rather you control his reactions to the situation around him.' Still, in my opinion, the great graphics, sound effects and the fact that it's no pushover (i've been working on this for a week, and i still haven't got through disk 3). And the scene where Dirk gets crushed by a mass of slimy green tentacles isn't something you forget quickly.

- Saint Nikolai

Modifying the Startup Sequence
- A Simple Case

This article is not intended for those who have explored the limits of AmigaDOS (or ARP or whatever...); it is a simple introduction to modifying the startup-sequence. There are no fancy performance-oriented setups done, just a "how-to" guide to modifying the startup-sequence to do something it doesn't already do. Past issues of "Workbench" and "Amiga Transactor" cover more advanced topics. If you're still interested, read on...

The startup sequence, as its name implies, is a sequence of instructions which are executed when the system is started or booted. It is simply a batch file or collection of AmigaDOS commands, designed to allow the user to customise the environment at boot time. For example, you could set up a startup sequence on your favourite word-processing disk so that the word-processor is automatically started when you boot the system with this disk in drive DF0:, or you could set some small utilities running in the background.

The S: Directory

Just as a bit of background, there is a directory on the boot disk - the "S" directory - which is searched by the "Execute" AmigaDOS command if it cannot find the file you have nominated. It is assigned the name "S:" at system startup time. For example, if you type "execute myscript" from the CLI, AmigaDOS will search the current directory for a file called "myscript". If

this file is not found, the "S:" directory will then be searched.

The Startup-Sequence

The startup sequence may be found in the "S" directory on the workbench disk, and, since it is not a binary file, may be modified quickly and easily using "ed" or whatever text editor you normally use. It is a batch file, and, as such, may be executed using the AmigaDOS "execute" command. Note that if you use a word-processor to modify the startup sequence, you should save using a "text-only" option, to ensure that the word-processor does not save any control codes in the file. The file you should edit is "startup-sequence".

Very Important Note: Always take a backup of the disk you wish to modify - Never modify your original - and modify your copy, keeping the original in a safe place (just in case!).

At this point it is important to note that there are many different text editors on the market and it is nigh on impossible to describe the use of all of them. I will therefore describe the editor that everyone has on the Workbench disk which comes with their system - "ed".

Ed is a simple full-screen editor which opens its own window. This window may be re-sized or moved around just like any Intuition window. It is started simply by typing "ed filename" where "filename" is the name of the file you wish to edit (whether it exists or not). The filename may also contain a path, such as "ed df1:s/myscript", or "ed s:startup-sequence". If ed cannot find the file, it assumes you are creating a new one and presents an empty window ready to take input.

The Problem (finally...)

We have a "favourite boot disk" which contains some nifty bits of software - maybe "dmouse" (lightspeed mouse pointers!), "mclk" (to keep track of available memory and how late it's getting) and "snipit" (to grab bits of text from a screen). Just to keep things neat, let's say they reside in a directory called "Bin".

The problem is this - when we boot the machine, Workbench comes up. We then have to open the Workbench disk, click on the System drawer, then click up a CLI. So far, so good. Now, type in "runback snipit" (oops, runback couldn't find snipit - that's right. it's in "Bin"). "Runback :bin/snipit" and so on. By the time all those nifty things are running, you've lost interest (or forgotten why you switched the machine on in the first place). It takes too long!
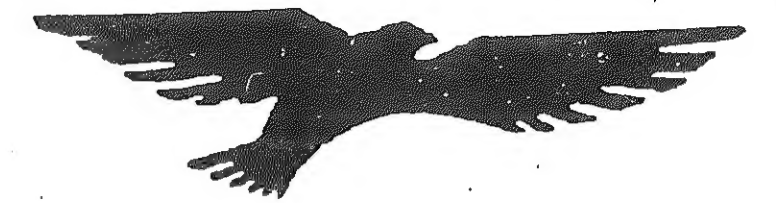
The solution is simple: put all those commands in the startup-sequence. Instructions in the startup-sequence are executed every time the machine is booted (either by switching on or Ctrl-Amiga-Amiga), so this is the best place for them. To edit the file, type "ed s:startup-sequence" at the CLI. Ed will then open a window, and you will see the existing startup-sequence. It will probably look something like:

```
echo "Workbench disk.  Release 1.2 version 33.47"
echo " "
echo "Use Preferences tool to set date"
if EXISTS sys:system
path sys:system add
```

endif
if EXISTS sys:utilities
path sys:utilities add
endif
BindDrivers
LoadWb
endcli > nil:

The cursor will be positioned over the first character in the file, ready for you to start typing. Ed is always in "insert" mode, which means that when you start typing, each character to the right of the cursor will be pushed along one position to the right. Also, if you hit the Return key, the remainder of the line (again, to the right of the cursor) will be pushed down to the next line.

While we're here, we'll do a couple of things:

- remove unnecessary commands (helps speed things up)
- add our new commands
- leave CLI active - not Workbench.

First victims are the "if" and "endif" statements: move the cursor down (using the cursor keys) to the first "if" statement. Then press and hold the "Ctrl" key, and press "B" - the current cursor line (the line "under" the cursor) will disappear, and all the other lines will roll back one line. Do the same to the other "if" statement and the two "endif" statements. Finally, remove the last three commands (this assumes you are not running on a system that requires BindDrivers). This should leave you with something like:

echo "Workbench disk. Release 1.2 version 33.47"
echo " "
echo "Use Preferences tool to set date"
path sys:system add
path sys:utilities add

Just to keep it all nice and neat, you could delete the extra spaces from the "path" commands by positioning the cursor at the beginning of those lines and pressing the delete key until the commands line up.

Now to add the new commands. The cursor should be at the beginning of the last "path" command line. Press and hold the "Ctrl" key once more, and press the "]" key. The cursor will move to the opposite end of that line. Press "return", and we're at the beginning of a new line. This is where we type in the new commands.

Type "runback sys:bin/snipit". That's the first one done! Note that I said "sys:bin/...". SYS: is a standard assignment made at system start time, which is a short-hand way of naming the disk used to start the system. Now type the remaining commands and that's it. All that remains is to save the startup-sequence. The file should now look like:

echo "Workbench disk. Release 1.2 version 33.47"
echo " "
echo "Use Preferences tool to set date"
path sys:system add
path sys:utilities add
runback sys:bin/snipit
runback sys:bin/rnclk
dmouse

Saving Your Work

If you press the "escape" key, an asterisk will appear at the bottom of the edit window. This is an "extended command" prompt and tells the editor that you wish to enter a special command. To save the file, press the "x" key and then "return". The file will be written back to the disk, and you will exit back to the CLI. If, however, you change your mind, press "q" at the asterisk to abandon the edit. This means all changes will be discarded, and, just to be on the safe side, "ed" gives you the chance to cancel the "q". If you wish to return to the edit and not enter an extended command, simply press "return".

Try It Out!

When the red light on the drive has gone out, reset the system (Ctrl-Amiga-Amiga) and watch what happens. You should find that the commands you wanted to execute have been executed and it took so much quicker to get there!

Summary

As you can see, it is a fairly simple matter to modify the startup-sequence. You can apply the above principles to any startup-sequence you wish to set up on your Amiga. It is designed for convenience so you may as well use it. Experiment (on copies) and enjoy!

Last Update :

Introduction to DNET
by David Varley

DNET is a collection of programs by Matt Dillon, first appearing on Fish Disk 145. The package contains fairly extensive documentation, so I will restrict this description to a brief description of DNET, and the modifications we have made to it.

DNET establishes a multi-channeled, error free link between two Amigas, or between an Amiga and a Unix machine, via the serial port. The machines may be connected directly, using a 3-wire null-modem cable, or the connection may be through a modem. Once the connection is established, it is possible to send and receive files, carry on a conversation with the operator on the other machine, and log onto the other machine and access its resources, all simultaneously.

My partner and I work as Consulting Engineers for several large firms in the Geelong region. The majority of our work is in developing process control software, and we use Amiga computers extensively as tools to this end. Our systems are identical Amiga 1000s, with 2Meg Fast RAM, Real Time Clock and 45Meg SCSI Hard Drive expansions, made by Subordinate Systems of Melbourne. (Incidentally, we have been very happy with both the hardware itself, and the support we have received, from this local supplier.) Due to the nature of our work, we are fortunate that much of it can be done from home. To this end, my partner has his system set up in Torquay, where he can both work and keep an eye on the weather, going out wave-jumping on his sailboard when the South-Westerlies pick up. My system is in my office in Geelong. As we are often both working on common projects, we need to keep up to date with files the other may have modified. This is where DNET comes in.

I can auto-dial into his system, over our Maestro ZXR 2400 baud modems, fire up DNET, and launch into a remote CLI/Shell session on his machine. From there I can scout about for messages and modified files, and fire them back onto my machine. At the same time I can be updating his system with files I have modified. Also at the same time, over the same link, he can be logged onto my machine, and be doing much the same as I am. We can simultaneously be holding a conversation with each other, through one (or several) terminal windows.

Modifications/Additions

DNET as provided on Fish 145 has some deficiencies. The most important of these was the failure of the SCLI remote CLI to work. Documentation said this was a kludge, requiring use of Matt's pipe: device to operate. Unfortunately, it did not work with the version of his pipe:
we had. In order to get around this, I wrote a new device driver, based on the AUX: device driver, and known as RMT: . New Client and Server programs to operate with this device were written, allowing one to open a RmtCLI across the link. This provides advantages over the pipe: kludge, in that Amiga control sequences are passed, and full Shell command line processing and history work on the remote. As this was done prior to AmigaDos 1.3, a CLI rather than the resident Amiga Shell is opened on the remote, and Matt's Shell started, via a script file RmtStart. I may add 1.3 Shell support as time allows.

Another deficiency was with the **putfiles** system. As files were passed across the link, their datestamps were lost. As we require accurate file-modified dates on all our files, I added the datestamp information to that passed across the link. As of AmigaDos 1.3, file protection bits have become more important. (Addition of Pure,Script and Archive bits.) To this end I shall have to pass this information also, but this has not been done yet. By the way, Matt's Shell (2.07M) loses this information on copy, and does not display these bits. It also will not find and run a command which has the same name as its directory. I have modified the Shell to correct these deficiencies (2.07MC).

Late Notes

I see that Fish Disks 168 and 169 have collections of Matt Dillon's work on them. As I do not have these disks (yet), I will assume that they contain updated versions of DNET and Shell. Pending confirmation, I will not release our modified DNET or Shell until I can apply our enhancements to the latest versions (if necessary).

P.S.I am writing this using WordPerfect 4.1.9 (8/10/88), which we have just received as an upgrade from 4.1 . Although it checks out well on the expanded Amiga, on the 512K machine it is so far almost unusable, giving "Volume RAM: is Full" errors when you try to List Files, Spell, Print, ...

cc   AAUA
      AUG

AMIGAMES
By Jim Apostolopoulos

The intention of thsi column is to review some of the latest Amiga games on the market. I hope this column may become a regular feature in this circular. This month's review is of the game (not very recent actually) called F/A-18 INTERCEPTOR (Electronic Arts). This game puts you in the pilot's seat of the latest and most advanced jet fighter in the world, the F-18 Hornet. you may or may not know that this is the aircraft Australia has recently purchased (at a great cost) for the R.A.A.F. The McDonnell Douglas F-18 is a twin engined multi-purpose fighter with both land and sea based roles. It can be used from land air-bases (as used by the RAAF) or from aircraft carriers (as used by the USAF).

My first remark about the game is that it is absolutely superb. As a passionate lover of "flight simulators", I tend to be rather critical and very fussy about the standard of such games. Interceptor passes all the tests I consider to be important. The game begins with a combat title screen. The first excitement comes when we are entertained with a "Top-Gun" type muscial background as the program loads (I feel like Tom Cruise already!) The first part of the game involves a selection from the main menu. This includes the following modes: demo, free-flight, training, qualification, selectable missions, and personal flight log. Basically, your aim is to train and then qualify for the all important missions. To qualify for the missions, you must complete a successful aircraft carrier landing (easier said than done!!). Experienced fighter jocks will probably succeed quickly. All the realism is there! For carrier landings (using the USS Enterprise-CVN 65), you need to lower the arrestor hook, the landing gear, etc. Top-Gun movie fans will know what I am talking about. As I said earlier, flight simulator lovers who know how to "fly" will adapt quickly. Novice pilots will require an accumulation of many flying hours to learn the required skills. There is an option of taking off and landing from either land bases or from the carrier. In addition, you are in the privileged situation of choosing not only the F-18 Hornet, but also the General Dynamics F-16 Falcon (singled engined air superiority fighter). The F-16 is lighter and more maneuverable and I think you will enjoy the differences in their flying characteristics (this further adds to the realism I think). The real strength of the game lies in the one area which is important to all serious game lovers-REALISM. There are excellent jet sounds and additional sounds that you would expect from such a game (in stereo, of course). The view functions are comprehensive. Apart from being able to rotate your view 360° around your cockpit seat, you have the choice of bottom and top views from the jet and 9 extra views from a distance outside the plane which look at the plane itself while stationary or in flight. In addition, there is a view from the control tower on the carrier deck. Your cockpit flight controls include the usual vital pieces of equipment. These include Head Up Display (HUD), radar, airspeed and altitude indicators, compass, fuel gauge, throttle etc. Your weaponry includes 6 air-to-air missiles (which include the good old sidewinders) and 500 rounds of ammo for your guns. Let's get into the game by pretending you have qualified. The missions all begin with an enlarged map of your general location (San Francisco-including the famous red Golden Gate Bridge which leads to Sausilito). The computer describes your mission and your orders so that you can successfully complete your objectives. You then enter the security

code, which is provided to approved personnel only (ie book protection folks!!!). The action begins. You are sitting in your F-18 and you are lined up on the carrier runway. Helmet, check, fuel, check, weapons, check. Any enemies around? Scan that radar man. Remember your training! (Controls are via joystick and keyboard. The mouse can be used to control the throttle). Full throttle and afterburners, clear deck, lift wheels. Wow! We are on our way. If you get cocky, after many flying hours, you can do a roll soon after take-off just to show off to any onlookers of course. You proceed to carry out your orders, depending on which mission you are in (this may involve protecting the plane in which the president of the USA is flying in!!!), like a good military bor or girl. Vital options include, for those beginners who get shot down, ejector seats. You get reprimanded for losing an expensive warplane if you crash. All the top Amiga colors and sounds are ther. you'll love it. The kids will love it (sorry Bill Collins). Nice little inclusions are things like a sonic engine volume when you look at the plane from outside (obvious isn't it). Try it, you will see what I mean. Finally, this is without doubt the best flight game I have ever played! This includes several years of experience on all the major (and minor) IBM and Macintosh games. I have completed, in the little time that I have, 5 missions. There are more still to be completed. That's the other attraction to this game. There is variety. That's all for now. Watch your six!!!

Future reviews: Bench test of joysticks for the Amiga; reviews of various newer games.

Letter to the editor
by John Rowley

Dear Con,

I read with interest your column in the June Workbench, and after giving myself a couple of days to calm down, I thought I would write and add my comments to the many other outraged responses I'm sure you'll get.

Even though I expect you're sick of hearing it by now, I have to make some sort of joke about the Cray-YMP - if the problem is really with "electrons approaching the speed of light", they must be building some sort of super cyclotron, not a computer.

But back to reality. In a typical metal conductor, electrons travel at a rate of roughly 0.5 mm per second (for a cuurent density of 6A/mm sq. In a typical computer signal the current density, and hence electron speed, would be somewhat lower!) The actual speed depends on a plethora of factors including the molecular and crystalline structure of the conductor, the resistance of the conductor (which is related to the above factors as well as things like temperature, purity, cross section etc) and the frequency of the signal.

On the other hand, the electrical signal itself, the electric waves which carry the data, travels at the speed of light. Always. This is a constant and there is no way to travel slower, unless they are delayed by mechanical factors such as waiting for switches to close (eg in a transistor in an IC).

It has always taken signals a certain amount of time to travel along the wires of a computer, and this time has been roughly the time it took to travel the length of the signal path at the speed of light. The reason this time was never bothered about

in the past was that the mechanical bits in computers, such as the CPU's memory chips, etc were just too slow for the time it took the signal to travel between them to make any difference. These days, the chips are so fast that the time it takes signals to travel between chips, or even inside them, is becoming one of the significant limiting factors.

The problem CRAY encountered was not that the electrons were being pushed through the wires any faster (the power requirements and heat generation just don't bear thinking about), or that the signals were any slower (or faster, but that just won't happen, due to certain constraints of relativity, which I don't really understand and I get a headache when I think about it), but that new design chips are capable I doof operating much faster than older ones.

I am completely open as to whether you are guilty of sloppy science of sloppy writing, but not all computer users (especialy, I suspect, Amiga users, given that it is supposed to be a computer which does NOT require scientific/computer expertise to use), and therefore not all Workbench readers, would realise that you had perpetrated one of these two heinous sins.

I trust you will correct this appalling lapse in what I regard otherwise as a fine and informative magazine.

Editor's reply: I am glad to receive such a letter outlining the faults I have done within the newsletter, as it allows me to create better and more useful publications. I do however reserve the right to explain myself in such a situation. You see my knowledge of Physics is far from minimal, yet I find that at the time of completing a newsletter with possibly the latest news and gossip, I neglect to question some of the data I process (as you can see from the odd spelling mistake I may leave in mine and other's pieces of writing). So I do apologise for this slip up in what I should have noticed, but it seems you were the only person to complain about it, possibly for similar reasons that I mis-quoted it. I apologise and I know that the limiting factor, being the speed of light, was not in the electron motion.

AUGADS

Have you sent in an article lately?

"Benchmark Modula-2" - REVIEW.
By Karl Lean

Before launching into this review, there is a "small" point I'd like to make clear. My "9 to 5" job is as a programmer, working in the MS-DOS world. Since we use either Turbo Pascal or Modula-2 at the office, I naturally wanted to use the same language at home on my Amiga. After a disappointing and frustrating battle with "TDI Modula-2", I was on the verge of resigning myself to a life of 'C' when I came across Benchmark M2. I've been using it for nearly a year now.

Which brings me to my point. About 5 weeks ago I decided to write a few articles about Modula-2 for the 'WorkBench'. The first was written and submitted, and appeared in the last issue (no. 37). My intention was to then write this review. A few weeks ago I rang the publishers of "Benchmark Modula-2" for some information. As a result of that call, and several others, the company I work for are now the Australian agents for this software !! - which means I now have a vested interest in the sales of this product. Up until June 3, 1989 I was just another user - now I'm part of the distributor. After a LOT of thinking, I've decided to write this review anyway. Despite the apparent conflict of interest, I am more interested in seeing good Amiga software being acknowledged and supported than I am in making money for my company - so for now I'm a user, not a salesman (Just don't tell my boss that!).

WHAT YOU GET.

The Benchmark Modula-2 (BM from now on) package is deceptively plain - all you get is the manual and 2 disks - not even a box! However, despite initial appearances there is plenty in this package. Each of the main components of the package is examined separately, and then the total "environment" is discussed.

(a) The Compiler/Linker. : Obviously enough, this is one of the two major parts of the system (the other is the Editor). Despite the publicity blurb, the compiler is not a FULL Modula-2 implementation - Processes and Co-Routines (Modula-2's inbuilt multitasking features) are not supported. I assume the multitasking power of the Amiga Operating System makes these M2 features redundant, and that is why they have been left out. The compiler is a one-pass compiler, and is VERY fast (10,000 lines per minute, according to documentation - although I don't have a program that big to test it on !!). The linker is also very fast, and much easier to use that a 'C' linker. Because of Modula-2's inbuilt version control system, the linker only needs the name of the 'Main' program module - any and all required library modules will be linked in automatically. Probably the best thing I can say about the compiler and linker is that after a year's hacking, I still haven't come across a bug!

(b) The Editor. : This is BM's strong point ! The Editor is a full implementation of the EMACS editor (similar to the one supplied on the Extras Disk), but with several additions specific to the Modula-2 environment. Edit multiple files at once, copy any size piece of code between files, or view several parts of the same file at once. Like EMACS, the keyboard is totally redefinable (make it look like your favorite editor!), and the mouse is fully supported. The Editor is full-screen (even PAL), and easy to use (after all, you can make it look like just about

any editor you choose!).

(c) Utilities. : The package includes a number of utility programs to increase the speed and ease of use. These include a Cross Refernece Utility, a Procedure Statistics Utility (for fine-tuning programs), and an Object Module Generator (allows you to convert object files created with other languages (ie, 'C' or assembler) into M2 linkable format). These greatly increase the flexibility of the package.

Of special note to anyone with Ram to spare is the Quick Load Utility. This will copy a specified list of files from disk to ramdisk much quicker than the normal DOS copy - allowing you to copy any required library files to the ramdisk (compiling and linking is much quicker from RamDisk).

(d) The Manual. : The 700 page manual is excellent. The first few chapters provide all the detail anyone would need to get started, and later chapters provide a wealth of information about the BM environment and options. The bulk of the manual is actually a print of the DEFINITION Modules for the AMIGA interface library. Since any program that wishes to access the special features of the Amiga (Menus, Gadgets, etc) will use one or more of these library modules, this part of the manual will be referred to often. To speed this up, a complete cross-reference of every variable, constant and procedure in the entire Amiga interface libraries is also provided. It's handy !!

One point to note - the manual does NOT teach Modula-2 programming. You will probably need a text book of some kind (and the manual contains a biliography of suggestions!).

(e) The Demos. : Perhaps the 'added touch' I liked most about this package was the demo disk. Virtually the entire second disk contains nothing but Modula-2 programs. Since these programs are compressed, there is actually almost 3 disks worth of demo code here (about 2 megs !). These demos range from the obvious right up to the intricate, and include utilities (the source to a version of 'KERMIT', a serial comms program, for example), test programs (used by the authors to test compiler features) and games (the source to "Gravity Wars", a simple arcade style game). In all there are literally hundreds of source code files, and I have found this to be immensely helpful when working on my own programs - there's an example somewhere in there for virtually anything you want to do with an Amiga. In addition to providing probably the best set of Modula-2 programming examples you could find, many of these programs are fully functional utilities - giving you double the value !

THE ENVIRONMENT.

What makes this package so much more usable, however, is the integration of all of these products into a total environment. This is a language implementation designed right from the beginning for the Amiga. From the editor, you can compile, link AND RUN your programs. When the program exits, you are still in the Editor. If the compiler finds an error, pressing the F1 key takes you to the first incorrect line. Assuming you don't crash the Amiga (no compiler can protect you from your own mistakes !) it's quite conceivable that once you have booted up and entered the editor, you will not have to exit until your program is running and debugged ! This makes the BM environment feel more like AmigaBasic, rather than the more tradi-

Games '89
A preliminary report

Although at the time of writing this column Games '89 was just about to commence, we thought it appropriate to give cred-it to those who participated (well, will participate) in helping us with out "stand" for AUG   at the show.

These include:

All the people who were there to look over the stand for the per-iod of the show.

Trace Technologies for their loan of a Bahco Projection unit for the purpose of displays.

Westend Computers Bayswater for their supply of an Amiga 2000, joysticks and software.

HiTechnology in Brighton, also for their loan of software for displays.

Neil Murray,
June 89.

FileReq
by Mark Kelly

```
' A FILE REQUESTER IN BASIC by Mark Kelly
' Should be pretty bulletprooof now (after 59 ver-
sions)
' Blame all bugs on Kaiser Stuhl Claret.
' Latest version : date 21-Mar-89 03:02 - Version D5

' Requires: DOS.BMAP (see Extras disk) & AmigaDOS 1.3
DECLARE FUNCTION Execute& LIBRARY  'must be here,
DECLARE FUNCTION xOpen& LIBRARY    'not in SUB.

'path$="df1:"     'you can optionally give starting
path
FileReq          'else DF0: is used.
IF  path$>"" THEN PRINT "File= "path$ ELSE PRINT
"Abort!"
END
-----------------------------------------------------
SUB FileReq STATIC
' File Requester by Mark Kelly  19-Feb-89 22:13
' Use the UP & DOWN arrows to highlight names.
' To enter a subdirectory OR select a file and ex-
it...
'    Hit <CR> when it's highlighted or click mouse on
it.
' To return to the parent directory...
'    Press "P" or Click PARENT button.
' To change the pathname's LIST pattern...
'    Press "C" OR Click mouse in pathname box.
' To go to the TOP of the list, press CONTROL-T.
'    (then UPARROW to go to the END of the list)
' Wildcards work as they do in the CLI's LIST command
'        AND you can use * instead of #?
' To quit & exit, press ESC.
' The list is circular & 'rolls' from one end to the
other.

' WHEN EDITING A PATHNAME...
' LeftArrow, RightArrow, Del & Backspace work normal-
ly.
' CTRL-X erases the pathname.
' CTRL-T goes to start (then LEFTARROW to go to end)
' CTRL-K deletes all chars to right  ( SAME AS IN )
```

```
' ESC restores the pathname & aborts editing.
' Click on a character to reposition the cursor.
' "ARROW" past one end of the pathname to the other.

' This SUB needs DOS.BMAP (see Extras disk).
' DOS.BMAP's full pathname must be given in the LI-
BRARY line
'    (In LIBRARY line, call it DOS.LIBRARY,  not
DOS.BMAP)
LIBRARY "sys:bmaps/dos.library" 'set this path!

SHARED path$
DEFINT a-z
LARROW$=CHR$(31) : RARROW$=CHR$(30)
UARROW$=CHR$(28) : DARROW$=CHR$(29)
CTRLt$=CHR$(20)  : CTRLx$=CHR$(24)
CTRLk$=CHR$(11)  : CTRLu$=CHR$(21)
DEL$=CHR$(127)   : BS$=CHR$(8)
ESC$=CHR$(27)    : Q$=CHR$(34)      'quote char

nShow=10                     '# lines to show (adjustable)
swW=274: swH=nShow*8-1       'show window Width: Height
x=200: Y=50                  'window pos

WINDOW   2," FILE    REQUESTER  ",(x,Y)-
(x+swW,Y+swH+36),18
PAINT (1,1),1
IF path$="" THEN path$="df0:"     'no path given
LINE (6,swH+7)-(swW-5,swH+17),2,b  'path box out-
line
PathY=nShow+2 : GOSUB ShowPath     'pathname line

'BUTTON DATA
bY=swH+21     : bL=PathY+2       'top pixel : label
line
bW=swW/2-6 : bH=13               'width : height
LINE (1,bY)-STEP(bW,bH),3,b     'draw outline
LINE (2,bY+1)-STEP(bW-2,bH-2),2,bf 'ESCAPE button
COLOR 3,2: LOCATE bL,1: PRINT PTAB(45)"ESCAPE";

OpenDir:
LOCATE 5,10:PRINT " Reading path "
GOSUB Parent

x$=path$     'translate all * wildcards to #?
2 Ast=INSTR(x$,"*")
IF Ast THEN  x$=LEFT$(x$,Ast-1)+"#?"+MID$(x$,Ast+1) :
GOTO 2

'Use CLI commands to do the work. Nifty, huh?
'First list directories
Com$="LIST >ram:tmp "+x$+" DIRS LFORMAT="+Q$+"[DIR]
%s"+Q$
GOSUB CLI
'Append list of files
Com$="LIST >>ram:tmp "+x$+" FILES QUICK NOHEAD"
GOSUB CLI

GOSUB CountLines
IF nLine=0 THEN
COLOR 3,1:LOCATE 6,9: PRINT " Path is empty! "
GOSUB ChopPath: GOTO OpenDir
END IF

DIM x$(nLine)
GOSUB StoreLines

IF nLine>nShow THEN Max=nShow ELSE Max=nLine '#
lines to show
ScrnFul:
LINE (0,0)-(swW,swH+1),2,bf  'zap window
Y=1                          'current (hilighted) SCREEN line
TopArray=1                   'array # of line at top of window
Array=1                      'current (hilighted) array item
OldY=1                       'previous screen line (to unhi-
light)
OldArray=1                   'previous array item
LOCATE 1,1: COLOR 1,2
```

```
FOR i=1 TO Max: PRINT x$(i): NEXT  'a windowful
GOSUB Hilight

Chosen=0
WHILE Chosen=0
GOSUB Event
IF Lin THEN                          'Click on a line
Y=Lin: GOSUB Update
Chosen=Array: k$=CHR$(13) 'Fake a <CR>
ELSEIF k$=DARROW$ THEN               'Down arrow!
Y=Y+1: GOSUB move                    'Forward 1 item.
ELSEIF k$=UARROW$ THEN               'Up arrow!
Y=Y-1: GOSUB move                    'Back up 1 item.
ELSEIF k$=ESC$ THEN                  'Panic! Abort!
path$="":GOSUB quit
ELSEIF k$=CTRLt$ THEN                'Top of list
GOTO ScrnFul                         'Nasty GOTO. Sorry
ELSEIF k$="C" THEN                   'CHANGE DIR
' Chosen=-1
ELSEIF k$="P" AND GotParent=1 THEN   'PARENT
Chosen=-1
ELSEIF ASC(k$)=13 THEN               'accept line
Chosen=Array
END IF
IF Y<=nShow THEN GOSUB Hilight  'if name clicked
OldY=Y: OldArray=Array
WEND

IF k$="C" THEN         'C key
GOSUB EditPath
ELSEIF k$="P" THEN     'P key
GOSUB ChopPath
ELSE                   'line chosen
x$=x$(Chosen)
Dir=INSTR(x$,"[DIR] ")     'is a DIR?
IF Dir THEN x$=MID$(x$,7)  'pull name
IF Wild THEN GOSUB ChopPath        'remove wildcards
GotParent=(RIGHT$(path$,1)<>":")   'check if changed
IF GotParent THEN path$=path$+"/"
path$=path$+x$        'add node
GOSUB ShowPath
IF Dir=0 THEN GOSUB quit  'file chosen? end
END IF
ERASE x$
GOTO OpenDir  'do it again
END

' Subroutines within a subprogram!

quit:   'the only legal exit
CALL xClose&(nhandle&) :LIBRARY CLOSE
WINDOW CLOSE 2 :COLOR 1,0: EXIT SUB

CLI:    'Launch CLI command from BASIC.
Com$=Com$+CHR$(0)
nil$="NIL:"+CHR$(0)
nhandle&=xOpen&(SADD(nil$),1006)
success&=Execute&(SADD(Com$),0,nhandle&)
RETURN

EditPath:
GOSUB ZapBox
x$=path$+" " : Lx=LEN(x$)
x=Lx :IF Col AND Col<=x THEN x=Col  'clicked on char?
COLOR 1,2: LOCATE PathY,2: PRINT x$;: Accept=0
WHILE Accept=0
LOCATE  ,1+x:COLOR 2,3
PRINT MID$(x$,x,1)            'highlight char
GOSUB Event
IF Col AND Col<=Lx THEN       'goto clicked char?
x=Col
ELSEIF k$=ESC$ THEN           'Abort
x$=path$: Accept=1           'Restore path
ELSEIF ASC(k$)=13 THEN        '<CR> accepts string
Accept=-1
ELSEIF k$=DEL$ THEN           'DEL
IF Lx>1 AND x<Lx THEN x$=LEFT$(x$,x-1)+MID$(x$,x+1)
ELSEIF k$=BS$ THEN            'BACKSPACE
```

```
IF x>1 THEN x$=LEFT$(x$,x-2)+MID$(x$,x): x=x-1
ELSEIF k$=LARROW$ THEN        'Left arrow
IF x>1 THEN x=x-1 ELSE x=Lx   'roll?
ELSEIF k$=RARROW$ THEN        'Right arrow
IF x<LEN(x$) THEN x=x+1 ELSE x=1  'roll?
ELSEIF k$=CTRLx$ THEN         'Erase path
GOSUB ZapBox: x$=" ":x=1
ELSEIF k$=CTRLk$ THEN         'cut off right
GOSUB ZapBox: x$=LEFT$(x$,x-1)+" "
ELSEIF k$=CTRLu$ THEN         'cut off left
GOSUB ZapBox: x$=MID$(x$,x) :x=1
ELSEIF k$=CTRLt$ THEN         'goto start
x=1
ELSEIF k$>=" " THEN           'Insert valid char?
x$=LEFT$(x$,x-1)+k$+MID$(x$,x): x=x+1
END IF
COLOR 1,2: LOCATE ,2: PRINT x$" ";    'Show path
Lx=LEN(x$)
WEND
WHILE MID$(x$,Lx,1)=" ": Lx=Lx-1: WEND  'Chop end
spaces
x$=LEFT$(x$,Lx)
path$=x$
GOSUB ShowPath
RETURN

ZapBox:      'blank path box
LINE (7,swH+8)-(swW-5,swH+16),2,bf:RETURN

move:
IF nLine<=nShow THEN 'window not full
IF Y>nLine THEN      'so wrap in window
Y=1
ELSEIF Y<1 THEN
Y=nLine
END IF
ELSEIF Y>nShow THEN           'At bot of window
Y=nShow :OldY=nShow-1 :TopArray=TopArray+1
SCROLL (0,0)-(swW,swH),0,-8        'Scroll up
ELSEIF Y=0 THEN        'At top?
Y=1: OldY=2: TopArray=TopArray-1
SCROLL (0,0)-(swW,swH),0,8        'Scroll down
END IF
GOSUB Update
RETURN

Update:
IF TopArray>nLine THEN      'rolled past end?
TopArray=TopArray-nLine
ELSEIF TopArray=0 THEN      'rolled past start?
TopArray=nLine
END IF
Array=TopArray+Y-1          'current array item
IF Array>nLine THEN Array=Array-nLine  'rollover ad-
just
RETURN

Hilight:  'unhilight old line
LINE (0,(OldY-1)*8)-STEP(swW,7),2,bf
COLOR 1,2: LOCATE OldY,1: PRINT x$(OldArray);
'hilight new line
LINE (0,(Y-1)*8)-STEP(swW,7),3,bf
COLOR 2,3: LOCATE Y,1: PRINT x$(Array);
LOCATE Y,80 'hide cursor
RETURN

ShowPath:
' wildcards in path?
```

tional compiler environments.

PROBLEMS.

Well, I guess a review's not complete unless there's something to criticise. Unfortunately for this review, there's not much to dislike ! Leaving a side questions of language (ie, if you don't like strong type checking, you won't like Modula-2 - so why are you reading this review !), probably the only problems with BM are not their fault ! Like most compiled languages, memory and disk space are at a premium. The system WILL run on a plain, 512K 1 Floppy Amiga, and will perform very well (certainly better than either 'C' compiler will in that setup) - but it really needs 1 Meg to be suitable or any large programming project (unless you are very patient, that is). Add more ram, and a harddisk, and you have the best programming environment currently available for the Amiga!

ADDITIONAL PRODUCTS.

Avante-Garde also have several additional products (sold separately) to support the BM package.

(a) The Add-On Libraries. : Three packages of pre-compiled M2 modules are available. These cover 3 areas - IFF and Graphics support, A set of simplified Intuition support modules, and a set of 'C' like routines to simplify translating 'C' programs into M2 (many of the demo programs are actually translated 'C' programs).

(b) The Source Level Debugger. : Available directly from Avante-Garde only (no sales through retailers) to registered users, this is a fully featured debugging program. I haven't yet got my hands on this, but a phone call to Avante-Garde has left me waiting anxiously - this program sounds good!

THE LAST WORD.

So, after all that, I guess I don't really need to say much more. I like this compiler package so much I talked my boss into marketing it !! As an Amiga user, it has annoyed me endlessly that we have an amazingly powerful machine that only a tiny fraction of us can program. It's not the 'C' language that I find so frustrating - it's the clumsy implementations we have to work with. Benchmark Modula-2 at last gives the average user the system he needs - the power of 'C' or assembler with the ease (almost) of BASIC. Buy It!(my boss made me write that!).

### Chelsea Art Show
Report by Norm Christian

I would like to thank all those members who helped to make our demonstration of Computer Art on the week-end of 10th/11th June a success. In particular Nikolai Kingsley (alias Saint Nikolai) and Craig Loubser for providing extra machines, software and labour. The following each donated several hours of activity: Dick Bartholomew, Rowan Gallagher, Barbara Hadkinson, Michael Halse, Donna Heenan, Alan Kent, David O'Regan, Len Sutcliffe. Special software was prepared by Neil Rutledge and David Jacobs. Without the generous help of these people and the moral support of the committee and other members, it would not have been possible to mount 18 hours of

continuous art demonstration.

Very favourable publicity for AUG and the Amiga has been generated and it is my impression that at least 3 sales of Amigas could ensue. One gentleman haunted us for over 2 hours and swears he now wants to sell his IBM; several families with young children were lost in open-mouthed admiration and amazement. Commodore owes the club a bonus for this effort!

Thanks again to all those who participated.
Norm Christian

AmigaWord
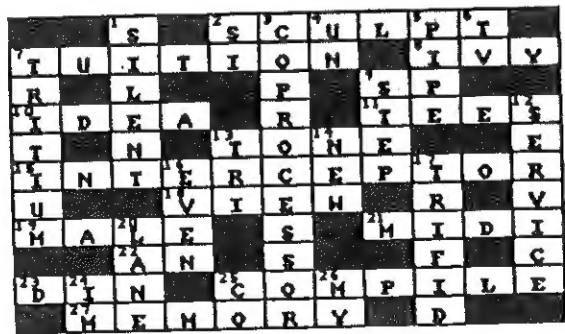
Answers to last month's crossword by Alan Garner. Sorry, this month's crossword files received were corrupted.

Nag
by L.A. Beranek

When I first came across calendar/reminder utilities I thought, great, now I can have the date, time etc. at my finger tips and also be able to prove to others of my infallible memory with the discreet use of a reminder function.

In practice, it turned out to be a little different. For a start you always had to run the damn thing or put it in your startup sequence, load a data file and then shuffle windows or screens around to use the calendar/memo functions. So what usually happened was that I would start using the program and then gradually it became too much of a nuisance. Eventually it would be lost in the endless quest for more disk space (this is also another subtle plug for shareware).

NAG arrived on the scene and I thought ho-hum, another calendar/reminder utility. This time, however, it stuck and I finished up sending my shareware contribution to the author, Richard Lee Stockton (whose birthday is exceedingly well-known to all users of NAG).

Version 1.7 is the last version of NAG as this program now has been expanded and made commercial. When opened the program gives a full screen window with 3/4 of it dedicated to the actual reminders starting with the first reminder closest to the current date. The top right half of the remainder shows the current year, month and the dates in the current month. Below this are various gadgets. The current date has an orange square around it. To change the month or year you are looking at, pressing the left mouse button when the cursor is on the >>> gadget at right of the month or year will increase it one step per click. The <<< gadget to the left of the month or year will decrease it in a similar fashion. Individual dates may be selected by the point and click method.

The gadgets below this area are NOW, EDIT, PRINT, SEARCH, SHRINK, QUIT and an hidden gadget in the title

box which re-configures NAG. Selecting NOW zaps the display to the current date. EDIT brings up a window which displays the reminders for the current date selected and a rudimentary editing facility for entering or editing each line. SHRINK converts the window into an icon the size of the word NAG (which is printed in it) and simultaneously saves any edits that you made.

Reminders are brought to your attention with your selection of flash, beep, sound sample and or a voice which reads whatever you had typed in for your reminder. The sound samples that came with the disk update were worth going through on their own. They ranged from Bogart and Lorre clips to animal noises and a sneeze with music in between. This can cause some interesting situations like in the case of a friend of mine who was trying to track down this voice that echoed through the hall every 30 sec. while I was away.

That voice, incidentally, depends on the devs/narrator.device and libs/translator.library which come with the standard workbench. It can be changed in pitch, sex (male, female and robot) and rate. The shareware program comes with an excellent manual in the form of a doc file. Richard Lee Stockton apparently has heard that some people don't have their computers on every day and has taken care of the problem of missed reminders by having NAG come up with its full size window on firing up to apprise you of that fact. Well, at least you know what you've missed. The program takes up between 40-80k bytes depending on what, if any, IFF sound sample you include. As a result I've squeezed out some precious space on my workbench disk and have the program run from my startup sequence.

The commercial program (which I now have) has a printed manual which gives graded instructions to everybody from regular computer users to 'where is the on button' people. It has in built help, config. and regular event file edit, auto dialer, an AREXX port, hotkey and easy access to the editor of your choice facilities. The shareware program has the config. and regular event files but you have to edit them using your own editor following the instructions in the manual. I'm not sure of the price of the commercial version, NAG PLUS 3.0 in Australian dollars, as it apparently hasn't hit our local retailers yet.

MeGNU
by Mark Kelly

```
' MeGNU - a cow of a program!
' A WordPerfect-like POP-UP MENU
' n-button menu-style requester by M.Kelly
PRINT "MeGNU"
PRINT "Click ON a MENU item, or
PRINT "enter its number or
PRINT "highlight it with the arrow ";
PRINT "keys & hit RETURN"
PRINT
PRINT "The menu appears where the mouse ";
PRINT "pointer is"
ON BREAK GOSUB quit:BREAK ON:DEFINT a-z
repeat:
MeGNU "!Want to see a demo of MEGNU?","!Sure!/Yes"
'build a menu with long labels
lab$="Click on an item/Enter the item's number/"
lab$=lab$+"Hit RETURN when the item's highlighted"
MeGNU "How to select a menu item",lab$
lab$="Yes/Sure!/Hell, yeah!/Great!/Of course!/Love it"
```

```
MeGNU "Do you like MEgNU?",lab$
lab$="item A/B/C/D/E/F/G/H/I
MeGNU "Pick an item",lab$
MeGNU "Do you prefer?","!WordPerfect/TextCraft/Ed"
MeGNU"!Press button to continue","!BUTTON"
fil$="FRED"        'using a string variable
MeGNU "Want to delete "+fil$+"?","YES/!FORGET IT"
value!=35.234  'using numeric var.
q$="Is a value of"+STR$(value!)+" acceptable?"
MeGNU q$,"INCREASE IT/DECREASE IT/!IT'S OK"
MeGNU "Run this again?","!OK! Why not?/No"
IF hit=1 THEN repeat

quit: WINDOW CLOSE 2: LIST: END
'------------------------------------------------
SUB MeGNU (messg$,labels$) STATIC
SHARED hit
' messg$ = prompt message
' labels$ = up to 9 button labels separated by /
' e.g. MEGNU "Message","Item1/Item2/Item3"
' 3-way item selection:
' (1) numeric key (2) click on item
' (3) hit return on highlighted item
' Use up & down arrow keys to highlight items.
' Precede a label with ! to highlight it
'   as the initial default.
' A CANCEL button is automatically added unless
'   the message is preceded with !

DIM lab$(10): wind=2        'window #
UP$=CHR$(28): DOWN$=CHR$(29) 'arrow keys
s=1 'default=CANCEL button enabled
IF LEFT$(messg$,1)="!" THEN  'disable it?
s=0: messg$=MID$(messg$,2)
END IF

hit=0: wc=LEN(messg$)   'width in chars

labels$=labels$+"/"    'parse labels
c=1: slash=1: initial=0
nb=s              'button counter

WHILE slash<LEN(labels$)
nb=nb+1
IF nb>10 THEN
PRINT "TOO MANY LABELS!":END
END IF
slash=INSTR(c,labels$,"/")
l$=MID$(labels$,c,slash-c)
IF LEFT$(l$,1)="!" THEN   'default item
initial=nb
l$=MID$(l$,2)
END IF
c=slash+1
l=LEN(l$)
IF l+4>wc THEN wc=l+5 '...boost width
lab$(nb)=l$
WEND
w=wc*8 :h=nb*8  'width:height in pixels

' place requester under mouse
m=MOUSE(0):x=MOUSE(1)-w/2:y=MOUSE(2)-10
IF x<1 THEN x=1 ELSE IF x+w>630 THEN x=630-w
IF y<1 THEN y=1 ELSE IF y+h>186 THEN y=186-h
WINDOW wind,messg$,(x,y)-(x+w,y+h),0
PAINT (1,1),1: COLOR 2,1

' add automatic CANCEL button (unless disabled)
IF s THEN lab$(1)="CANCEL"
' build & print labels: add numeric key codes
FOR b=1 TO nb
lab$(b)=STR$(b-s)+" "+lab$(b)
LOCATE b,1:PRINT lab$(b);
NEXT

old=1: hit=0: i=1: starting=-1
IF initial THEN i=initial  'item to highlight
```

```
WHILE hit=0
ink$=INKEY$: m=MOUSE(0)        'click or key?
IF ink$<>"" THEN               'got a key hit
IF ink$=UP$ THEN               'up arrow?
i=i-1: IF i=0 THEN i=nb        'roll
ELSEIF ink$=DOWN$ THEN         'down arrow?
i=i+1: IF i>nb THEN i=1        'roll
ELSEIF ASC(ink$)=13 THEN       'RET=pick item
hit=i
ELSEIF ink$>="0" AND ink$<="9" THEN 'num?
hit=VAL(ink$)+s
IF hit>nb THEN hit=0           'too big?
IF hit THEN i=hit
END IF
ELSEIF m=1 AND WINDOW(0)=wind THEN 'click?
i=(MOUSE(2)/8)+.5:IF i<1 THEN i=1
hit=i
END IF

changed=(hit OR old<>i)       'changed line #?
IF changed THEN     'unhighlight old line
LOCATE old,1: COLOR 2,1
LINE (0,old*8-8)-STEP(w,7),1,bf
PRINT lab$(old);: old=i
END IF

IF changed OR starting THEN 'hilight line
LOCATE i,1: COLOR 2,3
LINE (0,i*8-8)-STEP(w,7),3,bf
PRINT lab$(i);
starting=0  'turn off flag
END IF
WEND
hit=hit-s       'selected item's ID
SOUND 2500,1: WINDOW CLOSE 2: ERASE lab$
PRINT "Button"hit"clicked"
END SUB
```

AmigaBasic Ramblings
by Rudy Kohut

There has been a lot written in various articles about setting up "Buttons" in AmigaBasic. Well, here is another variation on that theme!

The following is a piece of code preceded by a "REM" which indicates how the sub-program is used:

```
'Button 100,100,"Button",2,3,b1%()
SUB Button (x1%,y1%,Text$,fcol%,bcol%,id%()) STATIC
x2%=x1%+INT(LEN(Text$))*8+8
y2%=y1%+12
LINE (x1%,y1%)-(x2%,y2%),bcol%,bf
LINE (x1%,y1%)-(x2%,y2%),1,b
LINE (x1%-1,y1%-1)-(x2%+1,y2%+1),2,b
COLOR fcol%,bcol%:xyPTAB x1%+5,y2%-3:PrTex Text$
id%(0)=x1%:id%(1)=y1%:id%(2)=x2%:id%(3)=y2%
END SUB
```

In this sub-program:
- x1% and y1% are the TOP LEFT co-ordinates of the button box
- Text$ is the message you want placed in the box
- fcol% is the foreground colour you want
- bcol% is the background colour
- id%() is the array which holds the four (4) x,y co-ordinates of the box corners

When you set up the button with the call to the sub-program

with "Button", you pass values for the first 5 items, and the sub-program draws the button and returns the button box co-ordinates. Nothing special about this, except I have found it very useful when creating a "requestor" to have these co-ordinates in the array. Why?

Well, when I am programming a requestor which uses buttons to enable user selection, I often want to change the location of the button to get the most pleasing layout. Without the array, whenever I want to change the co-ordinates, I would have to find each reference in my code where I used the <MOUSE(1)> and <MOUSE(2)> commands and change the co-ordinates. With the array, however, I don't have to worry because the <MOUSE> commands are referenced to the array values. So whenever I change the initial call to "Button" for x1 and y1, the array values are automatically changed. A sample of the code may explain this better:

```
dummy=MOUSE(0)
x=MOUSE(1)
y=MOUSE(2)
IF (x > b1%(0) AND x < b1%(2)) AND (y > b1%(1) AND y
< b1%(3)) THEN
REM the user has clicked in the button box
```

By the way, in the sub-program you will notice two commands - <xyPTAB> and <PRTEX>. Both of these are references to sub-programs - see my article in the May edition of "Workbench" for an explanation of each.

Now enough about buttons!

Do you do much error-trapping in your programs? If so, you probably know by now that the AmigaBasic Manual has errors in the appendix which describes the error codes!

Here are the corrections which you should jot down in the Manual (Appendix A):

On page A-8, add: "33 Duplicate Label" and "34 Illegal Sub Call", and delete the reference to "49" as "Unprintable Error".
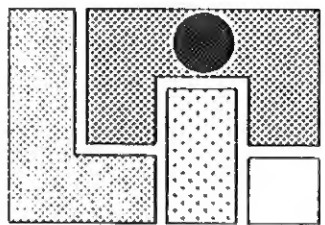
On page A-11, change: "74 Unknown Volume" to "49 Unknown Volume", and add: "66 Direct Statement in File"; "74 Rename Across Disks"; "77 Deadlock".

At this point, I'm not sure I understand what 66 and 77 actually mean! Perhaps one of the readers of Workbench can contribute an article and help clarify this and other mysteries of AmigaBasic.

Lastly, I had a call from a club member recently who complained about the slow scrolling of the AmigaBasic editor. I'm afraid I was too slow to ask whether he had a word processor or other text editor (like Memacs) which could be used instead. If so, save your program in ASCii format from AmigaBasic (use the command 'Save "myprogramname",A'), and open it in your text editor. Both AmigaBasic and the text editor can be running at the same time if you wish. This should speed things up for you!

`=AllocRemember(&RememberKey,BUFSIZE,MEMF_CHIP);`

Editor's note: I would like to draw some attention to the last two articles, by Mark Kelly and Rudy Kohut. These two members have been sending me at least one disk a month, which contain snippets of BASIC code. Unfortunately, being BASIC programs, sometimes they are rather lengthy, and have to be either held over for another month or more, or just cannot be printed. It is a shame, though, as they are so dedicated to the task of writing articles. It is for this reason that they both deserve a special mention in this month's newsletter. Hang in there, and you'll get your disks back soon (I hope). Keep up the good work.

NWAUG NWAUG NWAUG NWAUG NWAUG NWAUG

```
W                                                              U
A            North West Amiga Users Group                      A
U                                                              W
G     A Geographical Special Interest Group of AUG             N
N                                                              G
W            Meetings Held every 2nd Wednesday                 U
A             at 7:30 pm in Rooms 19 & 20, 1st Floor           A
U                  Essendon Community Centre,                  W
G              Cnr Mt Alexander & Pascoe Vale Rds              N
N                      Moonee Ponds 3039                       G
W                                                              U
A                    Meetings Scheduled:                       A
U               19/7/89  2/8/89  16/8/89                       W
G                                                              N
N           Nwaug members to be members of AUG                 G
W           NWAUG  annual fee of $5 helps cover                U
A              PD, Library and Equipment costs.                A
U          Meeting entrance fee of $1 ($2 visitors)            W
G             covers room hire/coffee/biscuits.                N
N                                                              G
W           NWAUG - A multitasking SIG of AUG                  U
A               See YOU at a meeting soon                      A
U                                                              W
G                                                              N
```

NWAUG NWAUG NWAUG NWAUG NWAUG NWAUG

Co-ordinators Comment

Last month I announced that the AUG annual general meeting would be held in August. The purpose of the AGM is to conduct annual elections and select a new committee for the next 12 months. A number of people have approached me since, wanting more information on the duties of some of the committee positions. So, for your general information the following is a summary of each of the positions.

Co-ordinator (President) - Has the responsibility of overall co-ordination and control of the groups activities. This position offers an opportunity for any member of AUG to become strongly involved and help set the future direction of the group.

Assistant Co-ordinator (Vice-President) - This position exists primarily as a support to the co-ordinator but has in the past taken on the specific responsibility of co-ordinating the SIG groups and special activities undertaken by AUG and its members.

Meeting Chairman - Is in general required to organize the events at the AUG monthly meetings and with assistance from other committee members arrange demonstrations and displays of items considered to be of interest to general group members.

Secretary - Performs the usual functions expected of the secretary of any club or user group such as general correspondence, collection and distribution of committee meeting minutes and booking of meeting rooms.

Treasurer - Again a fairly traditional position involving the management of the daily finances of the group e.g. collecting and banking of funds received from P.D. disk sales, membership payments etc.

Membership Officer - Responsible for managing membership of the group by collection of dues, updating of database and issuing of renewals.

In addition to the above formal positions there are four general committee positions to cover the additional requirements of helping to run a group the size of AUG. The positions of Newsletter Editor, Software Librarian, Book Librarian and Purchasing Officer can be held by ordinary members of the group and are usually selected by committee members. This summary is offered as a guide only and is not to be considered a formal position description, the rules of the association define the specific requirements in more detail. The group would also fail to operate without the support and work put in by the co-ordinators of the Special Interest Groups. The committee meets once a month to discuss group business and help prepare newsletters ready for posting and apart from this most other duties can be handled by phone contact or at the main monthly meeting.

The June AUG meeting was attended by more people than usual - are the meetings proving more interesting ? or was it just something to do on a miserable rainy cold Sunday. There was a demonstration of an overhead projection display device by representatives from ELECTROBOARD which sits over a standard overhead projector and connected easily to the composite video output of an Amiga 500. The display (Black+White) was clear and quite readable with Workbench displays but had trouble with 4096 colour HAM pictures. The device was impressive in the features it provided such as storage and local editing of video pictures and automatic sequencing of captured frames.

Power Peripherals, the Australian distributors for SPIRIT products attended the meeting and had an Amiga 500 opened for display of their memory expansion products. They offer quite attractive user group prices and were pleased with the response they have had from their ad. in our newsletter last month. Another company impressed with the power of advertising in WORKBENCH is Fagan McFarling who have received several orders for Lattice C in direct response to there ad. last month.

At the June meeting we experimented with a microphone and PA system after comments of difficulty in hearing voices from the stage area. I was a little reticent to use a PA system as this sometimes creates a barrier to discussion between people in front of the meeting and people seated in the main body of the group - a bit of "us and them". However I could not argue with the unanimous vote of approval from everyone at the end of

the meeting.

Some months ago the possibility of running a short course in C programming for AUG members was mentioned and this was discussed again at the June meeting. We now have someone interested in conducting such a course and more details will be provided at next months meeting. It will be an introductory course to be run at a venue and time separate to our monthly meeting beginning sometime in August/September. The course will be presented by Eric Salter and if you wish to register your interest please direct enquiries to him either via our P.O. Box or at the July meeting. Course numbers will be limited, a nominal fee ($25 ?) will be charged and some form of programming experience would be and advantage.

If anyone else is interested in running training courses on Amiga specific subjects please contact me and we will do all we can to help you set it up or put you in contact with others who would be happy to help you present a combined effort. Having introduced the concept of Special Edition Workbench publications (e.g. Viruses) and established a user Help Network I think paid training short courses are the next logical way of providing assistance to Amiga users not available elsewhere.

Lester McClure June 1989

Support our Friends at WESTEND

For those that may not have heard, a strong supporter of Amiga User Groups, namely ULTRAPHASE, has now ceased trading despite a healthy trading position of their most successful store at Knox District Centre and Royal Arcade in the city.

We are most pleased that two members from that store, Andrew Bartosy and Ben Beekman, have joined forces with Gordon Frost and Philip King to open their all new franchise business, WESTEND COMPUTERS, located at Shop 3, 40 Station Street, Bayswater (located directly opposite the Bayswater Railway Station).

Of course, they will be stocking all the COMMODORE rane for the real enthusiast, as well as some other odd named brands such as AMSTRAD, ATARI, SEGA and ARROW for the less informed.

Backing their excellent Hardware range, will be lots of well stocked shelves of Software and accessories.

Ed's note - Reprinted with minor modifications from the Knoxcom Newsletter, May 1989. We support WESTEND because they supported us, like Commodore did.

Letter to the Editor

Transmission Method: Snailmail (Local)

Dear Sir,
I have programmed the Z80 (in the Sinclair ZX80 and ZX81) since I was seven, and I have recently expanded into the 16 bit field with the purchase of an Amiga 500 and a lot of 68000 series CPUs. I have already mad myself familiar with the instruc-

tions of thes CPUs, and I have been implementing this knowledge to good effect. However, my real field is with homebrewing hardware. I have a preliminary design for an eight Megabyte ram card for the Amiga 500/2000. This card has several features (some are good, some are better, some are shocking)
* Battery backed-up
* It is possible to install an infinite number in parallel
* Utilizes readily available components
* Expandable in increments of 32K
Now the bad news...
* It consumes rather a lot of power
* If you want 8 meg, you have to install 512 chips!
* It's rather tricky from a wiring point of view
* It connects via a ribbon cable which should ideally be soldered to the 68000

If you are interested in it (from the point of view of a reader project), I would be happy to write a series of articles totalling about 8-10 thousand words and submit them along with full schematics.

The articles would be written for an audience if electronic illiterate - nobody would be incapable of comprehending them! I estimate that the cost of the PCB (without ram chips) would be around $25-$30. Ram would be about $1.8 per 32K.

Even if you don't like this idea, I am only too willing to design projects and write articles. Just tell me what you want! Note- if you want me to design circuits, I would appreciate pin diagrams of the ports to be used. The A500 manual has very little technical data, and what there is is not to be trusted!

As proof of interest in the Job, I enclose article #1 on interfacing 3 more sound channels and a hardware speech synthesizer to the Amiga. This project is currently in the testing phase: you can print it if you want, but I will not release final version circuit board layouts until it is completely tested Ok.

Yours sincerely (Well, most of the time...)
Lewin A.R.W. Edwards.

Editor's note - this is the most unusual letter I have ever received. Although I presume he hadn't intended on having this letter printed, I thought it would bring about certain comments from readers. I really do appreciate your willingness, but I didn't have time to type out your first article (4 pages long handwritten). I love the idea, and your articles, and hope to be printing some in the future!

Editor's Comments
(Written 28/6/89)

Good lord, everyone is saying. What has happened to our "big" newsletter? Why is it all of a sudden back to 18 pages. Please, don't think it is because you lot aren't contributing. By no means. In fact, the contributions are rolling in, with the addition of another regular column, Amigames from a friend by the name of Jim Apostolopoulos. The reason it is smaller is that I am using a smaller font - Times 10 point to be exact, which also allows me to use smaller line spacing and therefore have a smaller newsletter all round. Why you ask? Well, it's like this.

Amiga Help-Network

The following is a list of AUG members who have volunteered to share their knowledge/experiences with others. If you also want to help and have your name listed here please contact Lester McClure (233 5664 A.H.). The names are not listed in any order of priority and the format may change in future listings. Please keep contacts to reasonable hours (6 to 9 pm unless otherwise mentioned) and remember one very important basis of this service - they are volunteers...

Neville Sleep -	AmigaBasic (beginner level)-	546 0633
Rudy Kohut -	AmigaBasic (intermediate)-	807 3911
John Elston -	AmigaBasic (advanced)-	375 4142
Alan Garner -	AmigaBasic, A/C Basic-	762 7891
Mal Woods -	C (beginner level), Professional Page-	288 5472
Gary Duncan -	C (advanced) - AZTEC-	878 2854
Eric Salter -	C (advanced) - LATTICE, TeX-	861 9117
Norm Christian	-Amiga Art + Music-	580 3756
Neil Rutledge -	Music, Audio sampling, MIDI-	597 0928
Russ Lorback -	Excellence!, Superbase Professional (Beg - Int.) After 9:30pm-	756 6640
Simon Shead -	Amiga Video-	383 4905
Darren King -	Amiga viruses, Modems/communications-	546 5040
George Wahr -	Side-Car-	376 6180
James Gardiner	-AmigaDOS, Auto-boot hard drives-	523 6843
Stephen Bell -	Amiga hardware (68000) interfacing-	25 8415
Joe Santamaria	- Graphic arts - DPaint, Sculpt-3d etc.-	836 9129

The newsletter was currently draining a large proportion of the clubs funds each month. This newsletter, by being smaller, can be more cost efficient, and in actual fact, is *larger* in terms of content than ever before! Plus, 10 point Times Roman is a more balanced font than is 12 point. So why didn't I use it from day one? Well, Excellence! didn't have 10 point Times whereas Professional Page did. And you all know that I didn't have enough memory to use Professional Page to seriously complete the newsletter. Until we approached Power Peripherals of course, as you have probably read that article from page 2. Now here comes the crunch. We must choose to either keep the old newsletter (24 pages, at approx $150 more per month) or choose to purchase some extra memory for club usage in production of the newsletter. Provided we purchase the chips ourselves, and have a good deal with Power Peripherals, we should be able to recupe the funds sunk into the memory in around 5 months. From which point the newsletter will start saving money. Perhaps the committee hadn't intended on publisizing this issue so much, but I feel as it is a large proportion of the clubs funds, we should get more feedback from the club as a whole as well as the commttees decisions. It is vital therefore that we get some feedback from you in the near future relating to the following questions - Do you prefer this newsletter's format or are you content with the older one? Have you any any qualms about sinking the clubs funds into something that will only be used by myself for the majority of the time. Do you have any ideas on how we can resolve this issue otherwise?

Some people will say - who cares? I can understand your reasoning as you feel it is not your money Ralph. Good on you. But if you do feel strongly or otherwise, please contact me or Lester, or just throw me out at the next elections. I'm sure some people will be wanting to do that. I assure you though, should I be re-elected, my interest in the Group and the newsletter will neither sway nor fall.

Ok, enough of the serious stuff. Onto the important stuff. This month's newsletter was printed courtesy of Dan Davies once again. The cover of last month's issue was taken from the Deluxe Photolab art disk, and is called airwar. This month's cover is a digitised picture of the surface of Mars from the demo images of PIXMate.

I haven't had a chance recently to update people's tokens and send disks back because I was caught up in the ritual of mid-year exams. I apologize for any inconvenience it caused you (and me).

Professional Page has proved to be a useful tool to use. I have found the jobs which were hard or sometimes impossible to perform on Excellence! are easy, and vice versa with other things, such as on screen display. It is, however, more suited to typesetting and layout (of course) and far more capable of graphic and block manipulation. Many people have sent in reviews, letters or phoned up and told me about their favourite typesetting or desktop publishing program. Please understand, to use them, I have to purchase them, and I am certain they all require vast amounts of memory for the type of work I am doing. If you wish, you can come over to my house while I am doing a newsletter and see why. Oh yes, and thanks again (that makes about four times) to Commodore in Sydney via Mike Clark, and Power Peripherals for use of their memory board.

Public Domain Software Order Form

Mail to: Amiga Users Group, PO Box 48, Boronia, 3155, Victoria

Disk Numbers:									

Don't forget to specify collection name, ie Fish, Amigan, Amicus, etc

Disks supplied by Amiga Users Group @ $8 each	$
Disks supplied by member @ $2 each	$
Club Use Only:	Total $
Member's Name:	Membership #:
Address:	
	Postcode:

Newsletter Back Issue Order Form

Mail to: Amiga Users Group, PO Box 48, Boronia, 3155, Victoria

Issue Numbers:								

Be patient, we may have to reprint some issues to fill your request

Number of issues ordered @ $2 each	$
Club Use Only:	Total $
Member's Name:	Membership #:
Address:	
	Postcode:

Application for Membership of The Amiga Users Group Inc

Membership is $25 per year. Send your cheque to: Amiga Users Group Inc, PO Box 48, Boronia, 3155

Surname: _____

First Name: _____

Address: _____

_____   Postcode: _____

Phone Number: _____   STD Code: _____

Where did you hear about AUG: _____

Details on this side are optional

Year of birth: _____ Which model Amiga: _____

Occupation: _____

Interests: _____

Dealer's Name: _____
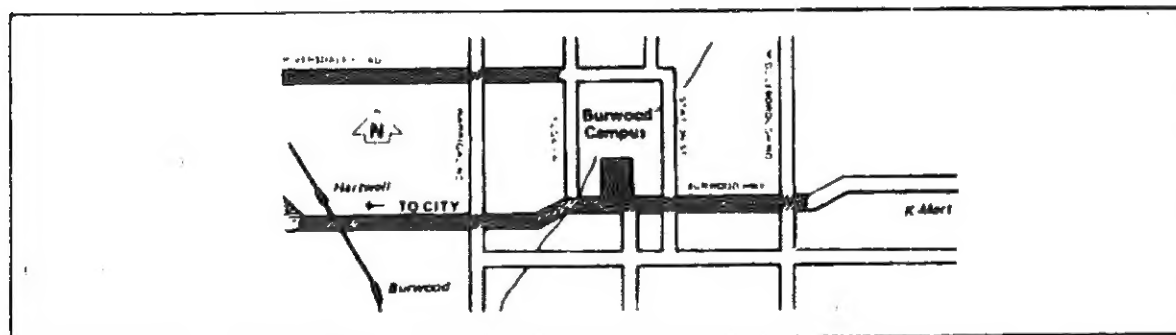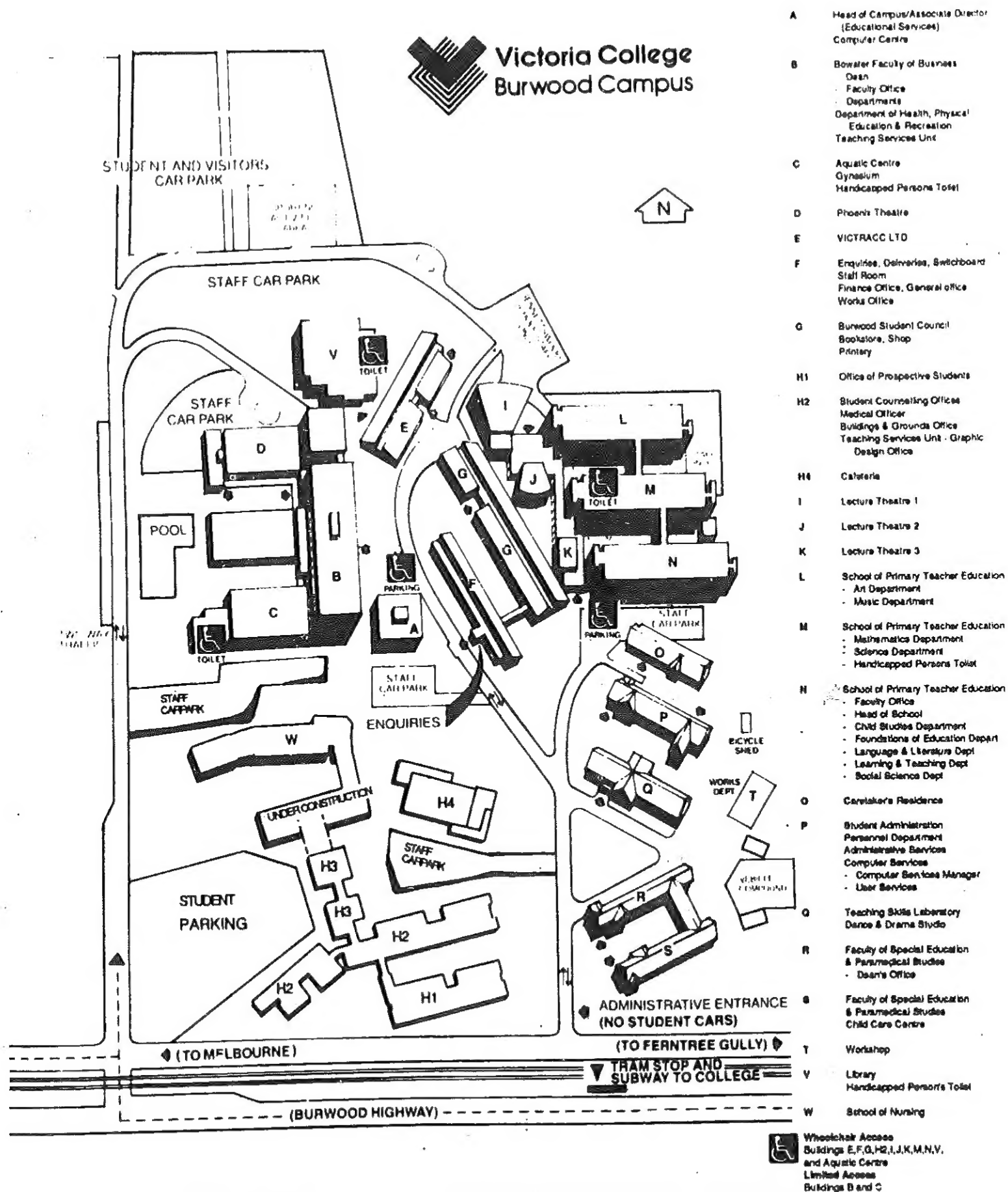
Dealer's Address: _____

Signed: _____   Date: _____

If admitted as a member, I agree to abide by the rules of the Association for the time being in force.

Club Use Only	Date	Paid	Rcpt #	Memb #	Card Sent

AUG meets on the
third Sunday of each month

Victoria College
Burwood Campus

A	Head of Campus/Associate Director (Educational Services) Computer Centre
B	Bowater Faculty of Business — Dean, Faculty Office, Departments. Department of Health, Physical Education & Recreation. Teaching Services Unit
C	Aquatic Centre, Gymnasium, Handicapped Persons Toilet
D	Phoenix Theatre
E	VICTRACC LTD
F	Enquiries, Deliveries, Switchboard. Staff Room. Finance Office, General office. Works Office
G	Burwood Student Council. Bookstore, Shop. Printery
H1	Office of Prospective Students
H2	Student Counselling Offices. Medical Officer. Buildings & Grounds Office. Teaching Services Unit - Graphic Design Office
H4	Cafeteria
I	Lecture Theatre 1
J	Lecture Theatre 2
K	Lecture Theatre 3
L	School of Primary Teacher Education — Art Department, Music Department
M	School of Primary Teacher Education — Mathematics Department, Science Department, Handicapped Persons Toilet
N	School of Primary Teacher Education — Faculty Office, Head of School, Child Studies Department, Foundations of Education Depart, Language & Literature Dept, Learning & Teaching Dept, Social Science Dept
O	Caretaker's Residence
P	Student Administration. Personnel Department. Administrative Services. Computer Services — Computer Services Manager, User Services
Q	Teaching Skills Laboratory. Dance & Drama Studio
R	Faculty of Special Education & Paramedical Studies — Dean's Office
S	Faculty of Special Education & Paramedical Studies. Child Care Centre
T	Workshop
V	Library. Handicapped Persons Toilet
W	School of Nursing

Wheelchair Access
Buildings E,F,G,H2,I,J,K,M,N,V, and Aquatic Centre
Limited Access
Buildings B and C

Where is Victoria College, Burwood Campus?

Victoria College is on the North side of Burwood Highway, Burwood, just East of Elgar road. Coming from the city along Burwood Highway, turn left at the first set of traffic lights after Elgar road. Follow the road around past the football oval, over three or four traffic bumps to the car parking areas near the netball courts. Further up the road, you'll find lecture Theatre 1

If you have a Melways, try Map 61 reference B5.